



Saranathan
College of Engineering

(Affiliated to Anna University - Chennai)

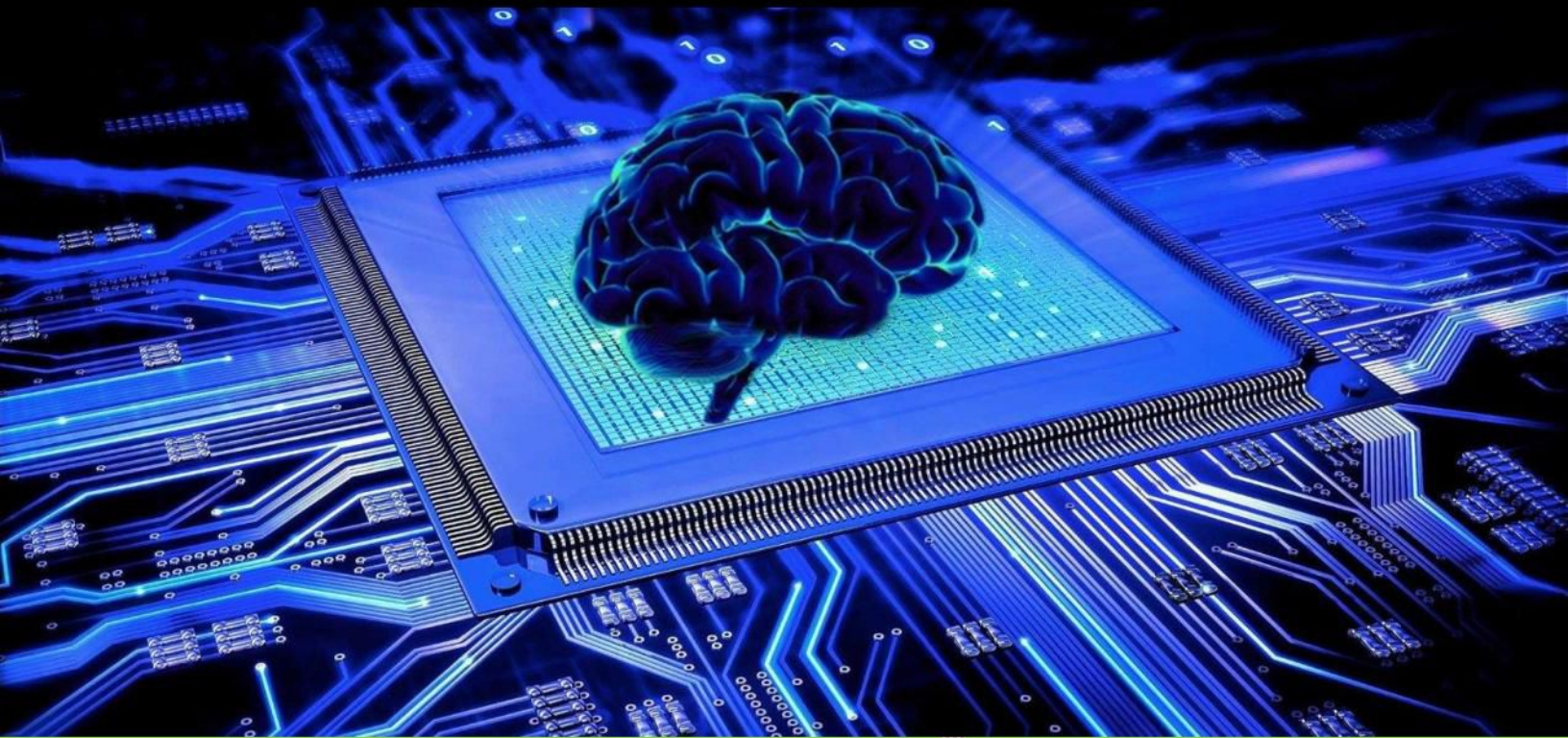
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IEI

2016

COMSCE - WAVE



E-MAGAZINE VOL 2.0

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

About us

The Department of Computer Science and Engineering is aiming to impart quality professional education to aspiring students. It adopts innovative ideas and methods to improve the quality of education. Highly motivated and enthusiastic students can explore their ability with a solid milestone with their valuable knowledge in the Department Magazine “COMSCE-WAVE”.

Our Department is an active Member of the Computer Society of India (CSI) Students Chapter. The Department with its cohesive team of faculty members, offers a sound program at the UG level. The curriculum is a blend of the conventional and theoretical. It is based on the curriculum of the Anna University-Chennai and keeps up with the growing demands and the changing trends of the software industry and research laboratories. Core courses include Programming Languages, Computer Architecture, Database Management Systems, System Software, Networking Technologies and Artificial Intelligence.

State-of-the-Art computing facilities are provided by the Computer Center - Computer Support Group (CSG). Our Computer Centre has a newly established data Centre (private cloud). This epitomizes the cutting edge technology available in our college. The servers which support the LAN, also provide a Linux/cent-OS environment. The Department has an MOU with Microsoft. The Department also has 15 Mbps of internet facility and campus wide Wi-Fi facility.

Milestone	Year
Started B.E (Computer Science and Engineering)	1998
Increased intake for B.E	2000
Increased intake for B.E	2011
State First in Anna University Examinations	2012
Accredited by IEI	2015

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

- 1. To provide students with a strong foundation in the mathematical, scientific and engineering fundamentals necessary to formulate, solve and analyze engineering problems and to prepare them for graduate studies, R&D, consultancy and higher learning.**
- 2. To develop an ability to analyze the requirements of the software, understand the technical specifications, design and provide novel engineering solutions and efficient product designs.**
- 3. To provide exposure to emerging cutting edge technologies, adequate training & opportunities to work as teams on multidisciplinary projects with effective communication skills and leadership qualities.**
- 4. To prepare the students for a successful career and work with values & social concern bridging the digital divide and meeting the requirements of Indian and multinational companies.**
- 5. To promote student awareness on the life-long learning and to introduce them to professional ethics and codes of professional practice.**

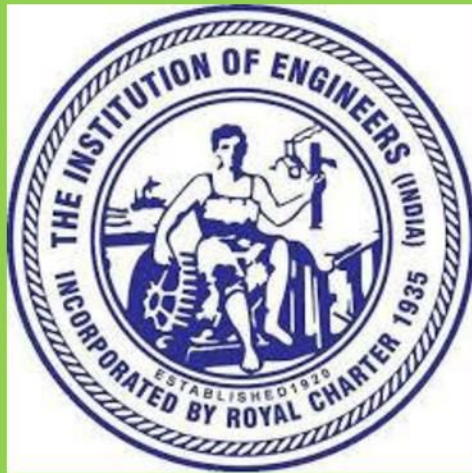
Vision

To evolve as a center of academic excellence and advanced research in Computer Science and Engineering discipline.

Mission

- To inculcate in students a profound understanding of fundamentals related to discipline**
- To inculcate skills, attitudes and their applications in solving real world problems with an inclination towards societal issues and research.**
- To promote research in the emerging areas of computer architecture and networks**

Our Department is
Accredited by The Institution of Engineers (India)



Since September 2015

Principal's Message



Greetings! I am extremely glad to note that our Computer science and Engineering Department E-magazine COMSCE-WAVE is being released. This magazine is the platform for the students and the staff members to showcase their hidden and creative talents to share their opinions on various issues through their articles. It also provides a panoramic view of the academic, sport, achievement and placement activities of the Computer science and engineering department during the academic year to its readers. My best wishes to Computer science and engineering department to continue this venture.

***Dr.D.Valavan
Principal***

Director's Message



I am glad to know that the Second Volume of the E- Magazine COMSCE-WAVE is being released shortly. It can be expected to contain articles and information by the staff and students on the latest developments in the software sector. This will help the students in knowledge acquisition so that they can perform well academically and in placement drives.

The staff members also can get updated for better knowledge dissemination

I wish the publication all success

*Prof.V.Nagarajan
Director*

Editor 's Message:

In the era of modern technology, the update of knowledge is necessary. We Engineers should be updated, as a part of knowledge gathering COMSCE-WAVE e-magazine releases annually with recent technical articles and year's events that have gone by, the magazine also showcases the talents of our faculty members and students.

With a sense of pride and satisfaction I would like to say that with the active support of the management, faculty and students, COMSCEWAVE has come alive. I truly hope that the pages that follows will be interesting.

EDITOR IN-CHARGE

K. Mohanappriya, Assistant Professor, CSE

STUDENT EDITOR

K.Arun Balaji , II CSE

EVENTS 2016-2017

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MEMETIC ALGORITHMS

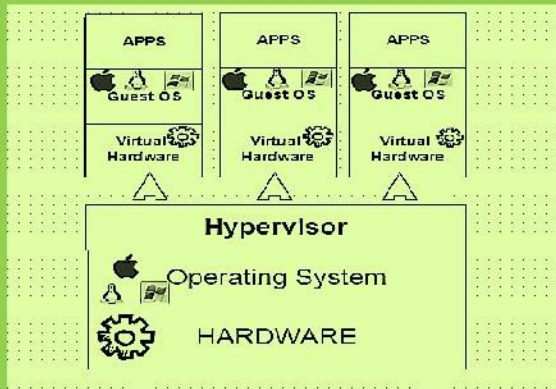
HYPERVERSOR VIRTUALIZATION Vs CONTAINER VIRTUALIZATION

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HYPERVERSOR VIRTUALIZATION Vs CONTAINER VIRTUALIZATION

S.Venkatasubramanian, Asso. Prof./CSE

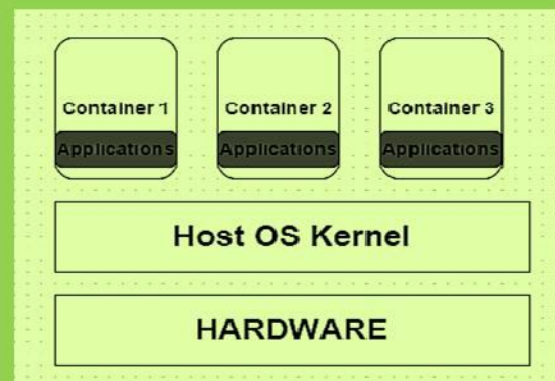
Virtualization is a method or technique used to run an operating system on top of another operating system. So, the hardware resources are fully utilized and will be shared by each of the operating system running on top of the base operating system. The basic idea behind a hypervisor based virtualization is to emulate the underlying physical hardware and create virtual hardware (with your desired resources like processor and memory). And on top of these newly created virtual hardware an operating system is installed. So, this type of virtualization is basically operating system



agnostic. In other words, you can have a hypervisor running on a windows system create a virtual hardware and can have Linux installed on that virtual hardware, and vice versa. A Hypervisor is also called as a virtual machine Monitor(VMM), This is because the hypervisor sits in between the guest operating system and the real physical hardware. Hypervisor controls the resource allocation to the guest operating system running on top of the physical hardware.

Even in virtualization there are two different types of Virtualization mainly used in the

industry. One is Hosted virtualization and the other is Bare Metal Virtualization. Hosted Virtualization is a software hypervisor installed inside the base operating system, which will intern do the resource allocation and monitoring. Examples includes VMware Workstation, Microsoft's Virtual PC, Bare metal virtualization has only one major difference compared to Hosted virtualization. The difference is that the Hypervisor sits directly on top of the hardware. The hardware device drivers are part of the hypervisor, and there will be only one memory and CPU manager (that is part of the hypervisor which sitting directly on top of the hardware. This is the reason it's called bare metal virtualization).



While discussing about hosted and bare metal virtualization, one common thing that we found was that both are based on a hardware level (basically they are virtualizing hardware resources). But container virtualization is done at the operating system level, rather than the hardware level. The main thing that needs to be understood about container virtualization is that each container (well call it guest operating system) shares the same kernel of the base system.

MEMETIC ALGORITHMS

Ms.V.Punitha Asso.Prof/CSE

Memetic algorithms (MA) is generally used as a collaboration of evolutionary or any population-based approach with individual learning or local improvement procedures. “Memetic Algorithm” was introduced by Moscato in 1989. His perspective is that it is close to a form of population-based hybrid genetic algorithm (GA) coupled with an individual learning procedure capable of performing local refinements. Memetic algorithms hold the duality of genetic and cultural evolution, i.e., permitting the transmission, selection, inheritance, and variation of memes as well as genes.

Definition: A memetic algorithm is an extension of the traditional genetic algorithm. It uses a local search technique to reduce the likelihood of the premature convergence. The cryptanalysis of simplified data encryption standard can be formulated as NP-Hard combinatorial problem.

In computational context, using ideas of memes and Memetic Algorithms in optimization may be referred to as Memetic Computing. Memetic Computing gives a roadmap to the latest results in natural computation, artificial intelligence, operational research and natural sciences, which are combined in novel ways so as to excel the basic limitations of a single discipline.

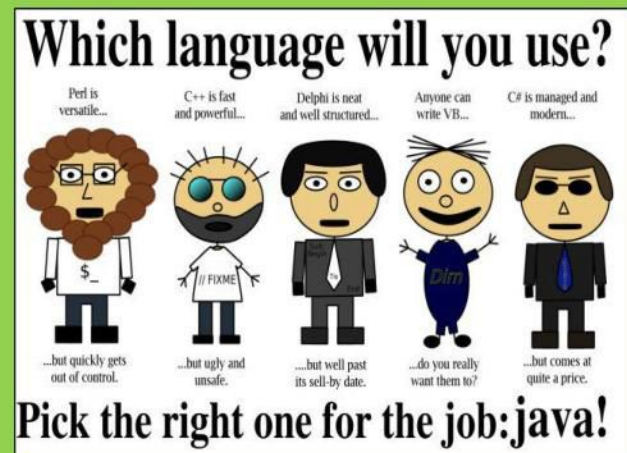
Example: in pattern identification, MA uses a rule-based local search to provide enhanced solution within the evolutionary system, thus

capturing regularly repeated features or patterns in the problem space.

Memetic algorithms can be applied to classical NP problems like, graph partitioning, multidimensional knapsack, travelling salesman problem, quadratic assignment problem, set cover problem etc. and can be employed to recent applications like training of artificial neural networks, pattern recognition, robotic motion planning

Bits:

- Why did the developer go broke?
Because he used up all his cache
- Unix is user friendly. It's just selective about who its friends are.
- Failure is not an option. It comes bundled with your Microsoft product.
- What do computers eat for a snack?
Microchips.



THE ERA OF A CASHLESS FUTURE

R.Mohankumar AP/CSE

In this digital world, recent trends show that digital money kept in mobile wallets will soon replace physical cash and even credit cards. Some countries are even actively trying to remove cash in circulation. We already use our phones for a million things, so why not use them as a payment method as well?



How do mobile wallets work?

Mobile wallets also sometimes called electronic/e-wallets, digital wallets and similar terms are mobile applications that enable financial transactions. They help customers like you and me to send payments for things we want to buy with just a few taps on the phone.

During payment, all we must do is to follow the payment instructions – enter or scan a code or an address, usually – and the amount will be deducted from your mobile wallet account into the merchant's wallet account. Currently, there are countless mobile wallet options available in the market as many smaller. This leads to many innovations, and each of them is competing for your patronage.

There are different kinds of e-wallets are now in practice such as, E-payment services,

Loyalty and Coupon-based wallet, Peer-to-Peer Payment wallet, Cryptocurrency wallets and Hybrid Wallet, Remittance wallets and so on.

GREEN COMPUTING:

P.Dineshkumar AP/CSE

It is the environmentally responsible and eco-friendly use of computers and their resources. In broader terms, it is also defined as the study of designing, manufacturing/engineering, using and disposing of computing devices in a way that



reduces their environmental impact.

Many IT manufacturers and vendors are continuously investing in designing energy efficient computing devices, reducing the use of dangerous materials and encouraging the recyclability of digital devices and paper. Green computing practices came into being in 1992, when the Environmental Protection Agency (EPA) launched the Energy Star program. Green computing is also known as green information technology (green IT). Green computing aims to attain economic viability and improve the way computing devices are used. Green IT practices include the development of environmentally sustainable production practices, energy efficient computers and improved disposal and recycling procedures.

HUMAN-MACHINE TEAMING - KEY TO CYBER DEFENCE:

N.Kavitha AP/CSE

An ongoing research is to develop systems to enable human-machine teaming to get the best of both worlds in applying cyber threat intelligence. The need for this capability is being driven by a combination of the rapid growth in the number of threats faced by enterprises and a shortage of people with cyber security skills. We need to address this skills shortage with more automation to eliminate manual effort, attracting more people, better education and training; simpler user interfaces to enable more junior IT people to get involved in security; and then at the high end, this human-machine teaming is about enabling the expert to do even more.

Human-machine teaming is vital in



the face of attacks such as the internet of things (IoT) botnet-enabled distributed denial of service (DDoS) attack on DNS services provider Dyn in October 2016. The attack on Dyn is a perfect example of the large scale of attacks we are going to increasingly face. We need machines to deal with the volume of risks that we've got out there so we can actually put our human intelligence on finding the hidden threats we really care about.

On the technology side, the human-machine teaming initiative is being driven by a need to do more than what traditional security information event management systems (Siems) can do, because they act on the known. A security event comes in. We correlate it, and then we drive actions off. But they are not very well designed to act on the unknown. There's a technical need to act on the unknown. On the business side, to reduce the difficulty of the security operations center (SOC) analysts and their experience drive the thought of human-machine teaming for the enterprises. Siems still has its importance. But they take a large chunk of the types of events and log aggregation that needs to be logged. We need to add a new type of high-level incident response technology since organizations are looking for, as their SOCs mature.

Today the world is overwhelmed with data and starved of analysis. The pendulum must swing back and provide more analysis to consume the data we have. As our analysis capabilities improve, the industry can afford to go back and generate more data.



The average user will spend just over 12 minutes on Facebook, while Twitter users spend about 3 minutes

KABY LAKE:

K.Mohanappriya, AP/CSE

Intel didn't just launch the new Core i7-7700K desktop CPU, it made a comprehensive update to its entire product line. The initial Kaby Lake mobile refresh was limited to a handful of SKUs; with this launch Intel is bringing out a larger number of cores intended for every price point. The



new chips are, for the most part, drop-in replacements for the Skylake SKUs Intel launched in 2015 and 2016, though most of the models feature at least a small clock jump over and above what Skylake offered

There's a new nomenclature attached to many of Intel's 15W and 28W CPUs. These new chips feature what Intel is calling "Iris Plus," meaning they incorporate a 64MB EDRAM chip alongside the GPU core. The 128MB EDRAM cores that Intel has previously shipped with Skylake and Broadwell aren't being carried over to the Iris Plus line, at least not for now. OEM uptake on these cores has never been high, even though they can improve integrated graphics performance by almost 100%.

All the new 7th-Generation chips support VP9 hardware decode, as well as supporting H.265 encode/decode completely in hardware. Thus, these cores are

comparable with streaming 4K video from Netflix or any other service that agrees to use Windows PlayReady DRM via the Edge browser. Intel has already said it won't bring its EDRAM to any desktop quad-core SKUs this cycle, so if you were hoping for a non-embedded chip with Iris Plus you'll have to look for a Skylake-based core or consider the Broadwell-based Core i7-5775C, which does have the 128MB cache.

Apart from improvements to media playback support, clock speed increases, and the Core i3-7350K (the first unlocked Core i3), the Kaby Lake refresh is a standard update to Intel's roadmap. A little more clock, a little more performance, and not much to specifically get excited about unless you've been waiting on an upgrade that was just a *little* faster than your 5-7-year-old system



SCADA

S.Geetha AP/CSE

It stands for Supervisory Control and Data Acquisition. SCADA refers to a system that collects data from various sensors at a factory, plant or in other remote locations and then sends this data to a central computer which then manages and controls the data. SCADA focuses on gathering and circulating the right amount of system information to the right person or computer within the right

amount of time so that creative solutions are made possible.

SONATA ACT

N. Sangeetha III CSE B

India is now - a- days improving a lot in technology, in a way of getting connected to our smartphones, this is one of them which I recently found out, which I would like to share it with you “SONATA ACT”. India’s largest-selling watch brand, SONATA from Titan company of Mumbai, a part of the Tata group launched their safety watches called ACT-App Enabled Coordinates Tracker. It is



designed exclusively for women safety.

How this SONATA act is helpful?

It is mainly used for the safety of girls and women travelling alone, especially at late hours, has been a concern for their families, but that’s not an issue anymore because Sonata act is a product that takes care of the safety factor in a simple way.

How it works?

This is one kind of safety device which makes use of custom made technology, and will interface with users smartphone to trigger distress alerts to a network of designated recipients when needed in emergency help.

The SONATA ACT watch is complemented with a mobile application to be downloaded onto the user’s smartphone. By making use of Bluetooth, the watch will interface with the mobile to trigger distress alerts to a network of designated guardians. The alert message will provide details of the user’s location to be sent to the guardians via an in-app alert as well as SMS

How to use it? - These watches will have a safety device installed in it, that alerts 10 selected phone numbers along with the location, whenever the button near the 8 o’clock is pressed twice, the watch will send an alert message SMS to the 10 people along with the location. SONATA ACT marks the incorporation of technology in the brands products, by adding values to the customers. The path breaking product caters to the Indian audience at accessible price point, functionally yet stylish. Bearing the hallmarks of trust and reliability synonymous with the Tata name, the ACT marks another milestone for Titan Company for having served 200 million customers.

```
Teacher Gave our student a Punishment  
To Write 5000 Times  
“I Will Not Throw Paper Airplanes In Class...”  
And Submit It Tomorrow...  
Next Day, He Submitted The Paper Written  
#Include<stdio.h>  
Void Main()  
{  
    Clrscr();Int N;  
    For( N=1 ; N<=5000 ; N++)  
    Printf(“I Will Not Throw Paper Airplanes  
    In Class”);  
    Getch();  
}
```

Be A Programmer... Think Differently

LEAP MOTION:

N.Bhavadharani II CSE A

Multi-touch desktop is a (miserably) failed product due to the fact that hands could get very tired with prolonged use, but Leap Motion wants to challenge this dark area again with a more advanced idea. It lets you control the desktop with fingers, but without touching the screen.



It's not your typical motion sensor, as Leap Motion allows you to scroll the web page, zoom in the map and photos, sign documents and even play a first-person shooter game with only hand and finger movements. The smooth reaction is the most crucial key point here. More importantly, you can own this future with just \$70, a price of a premium PS3 game title!

If this device could completely work with Oculus Rift to simulate a real-time gaming experience, gaming is going to get a major make-over.

CONNECTED VEHICLE PLATFORM

Ashika T II CSE-A.

Microsoft has announced a new cloud platform for connected cars called the Microsoft Connected Vehicle Platform at CES 2017. The platform uses the company's Azure cloud platform and aims to address

five core scenarios. These include predictive maintenance, improved in-car productivity, advanced navigation, customers insights and building autonomous driving capabilities. The cloud will handle the large volume of data that is generated from connected vehicles, and let car manufacturers use that data as per their needs.

In Microsoft's official blog, Peggy Johnson, Executive Vice President, Business Development stated, "Today, the car is more than just a ride between two places — it is a hub of activity for daily life. People are looking to have truly connected experiences



in their cars so that they can get more done, save time and make life easier. While safety and security are baseline requirements, our services can help make a person's work day

CAPTCHA - "Completely Automated Public Turing test to tell Computers and Humans Apart".

more efficient. For instance, imagine that Cortana seamlessly connects you whether you're at home or in your car. Let's say you're on your phone at home and tell Cortana to set up a meeting for you and your colleague the next morning at a coffee shop.

The next time you get in your car, Cortana reminds you of the morning meeting and starts navigation to get you to that coffee shop.”

Microsoft has already partnered with other automobile manufacturers like Nissan and BMW. Nissan has already announced that the Microsoft Connected Vehicle Platform will power Nissan’s next generation of connected vehicles. Microsoft will work with BMW on BMW Connected, which is a “personal mobility companion service” that aims to deliver in-car productivity services through Office 365, as well as intelligent personal assistance for drivers. Microsoft also insisted that it was not going to build its own connected car

HACKER:

Kaartic Sivaram III CSE ‘A’

One of the most misunderstood word

Note: This article is not about the person who breaks into computers or the “security breaker”. To know what it is about, please read on.

Many people misunderstand the word “hacker” as the person who breaks into computers and steals other people’s personal information (or) who does something related



to breaking computer security. The meaning

of the word “hacker” as (also known as RMS) “It means someone who enjoys playful cleverness, especially in programming but other media are also possible.”

To give a even more clear idea of what the word “hacker” means, I would like to share an event from Mr. RMS’s life that he has used this to clearly illustrate the term too

“I went to lunch with some GNU fans, and was sitting down to eat some tteokpaekki, when a waitress set down six chopsticks right in front of me. It occurred to me that perhaps these were meant for three people, but it was more amusing to imagine that I was supposed to use all six. I did not know any way to do that, so I realized that if I could come up with a way, it would be a hack. I started thinking. After a few seconds, I had an idea.

First, I used my left hand to put three chopsticks into my right hand. That was not so hard, though I had to figure out where to put them so that I could control them individually. Then I used my right hand to put the other three chopsticks into my left hand. That was hard, since I had to keep the three chopsticks already in my right hand from falling out. After a couple of tries I got it done.

Then I had to figure out how to use the six chopsticks. That was harder. I did not manage well with the left hand, but I

Facebook promotes hackers who find bug in their program but the condition is that they should not try this on Facebook. Facebook will pay you up to \$500

succeeded in manipulating all three in the right hand. After a couple of minutes of practice and adjustment, I managed to pick

up a piece of food using three sticks converging on it from three different directions, and put it in my mouth.

It didn't become easy—for practical purposes, using two chopsticks is completely superior. But precisely because using three in one hand is hard and ordinarily never thought of, it has "hack value", as my lunch companions immediately recognized. Playfully doing something difficult, whether useful or not, that is hacking.”

I guess this should have clearly explained what the term “hacker” means. Let’s see how that word lost it’s original meaning. The Hacker community developed at MIT in 1960s. To them “hacking” included a wide range of activities from writing software, to practical jokes, to exploring the roofs and tunnels of the MIT campus. The hackers at the MIT campus did a lot of things like finding a way to do a certain computation with only 5 instructions when shortest known program required 6, writing a program to understand question in english, placing some amusing object on top of MIT’s great dome or bypassing the security imposed on computers by the administrators. Bypassing security was done only by a very few hackers for the sake of cleverness and to use computer freely for some time. This is how “hackers” were in those days.

The real reason as to why the term “hacker” started to mean a person like a security breaker or something related is given my Mr. RMS himself as follows,

“Around 1980, when the news media took notice of hackers, they fixated on one narrow aspect of real hacking: the security breaking which some hackers occasionally did. They ignored all the rest of hacking, and

took the term to mean breaking security, no more and no less. The media have since spread that definition, disregarding our attempts to correct them. Thus, most people have a mistaken idea of what we hackers do and what we think. You can help correct the misunderstanding simply by making a distinction between security breaking and hacking—by using the term "cracking" for security breaking. The people who do it are "crackers". Some of them may also be hackers, just as some of them may be chess players or golfers; most of them are not.”

As Mr. RMS states in his explanation, I humbly request everyone who reads this article to use the word “cracker” to refer to a person who breaks security or who does malicious activities. It could be a contribution that you could do to the “Hacker community

Thank you for taking the time to read this article! I hope the “original hackers would come to the mind the next time the word “hacker” is used.

A black rectangular box with green, pixelated text that reads "YOU HAVE BEEN HACKED !".

A red starburst shape containing text about MIT's software.

Massachusetts Institute of Technology (MIT) has developed a computer software that can identify and distinguish a real smile from a of frustration.

Why do Java developers wear glasses?

Because they can't C#

What do you call 8 hobbits? A hobbyte

FACE SCANNER:

The technology was developed by FaceFirst, and even in a crowd you can't



escape their watchful eye: FaceFirst can track each individual face on a camera feed and run matches at the same time – and all of this happens live. Here's a quote from the CEO of FaceFirst, Joseph Rosenkrantz: "Within just a couple of seconds whoever needs to know receives an email containing all the evidence and stats about the person identified along with the video clip of them passing the camera so they may be approached then and there."

LEARN ABOUT BIG DATA-TECHNOLOGY:

V.Amrithavarshini, II CSE,'A'

- ✓ Big data analytics is the process of collecting, organizing and analyzing large sets of data (*called* big data) to discover patterns and other useful information.
- ✓ Big data analytics can help organizations to better understand the information contained within the data and will also help identify the data that

is most important to the business and future business decisions.

- ✓ Analysts working with big data basically want the *knowledge* that comes from analyzing the data.
- ✓ The challenge is in breaking down data silos to access all data an organization stores in different places and often in different systems.
- ✓ A second big data challenge is in creating platforms that can pull in unstructured data as easily as structured data. This massive volume difficult to process using traditional database and software methods.
- ✓ According to Datamation, today's advances in analyzing big data allow researchers to decode human DNA in minutes, predict where terrorists plan to attack, determine which gene is mostly likely to be responsible for certain diseases and, of course, which ads you are most likely to respond to on Facebook.
- ✓ Notably, the business area getting the most attention relates to increasing efficiency and optimizing operations. Specifically, 62 percent of respondents said that they use big data analytics to improve speed and reduce complexity

Mary Kenneth Keller is the first woman to earn a Ph.D. in Computer Science in the United States

BRAIN COMPUTER INTERFACE

DHIVYA S II CSE A

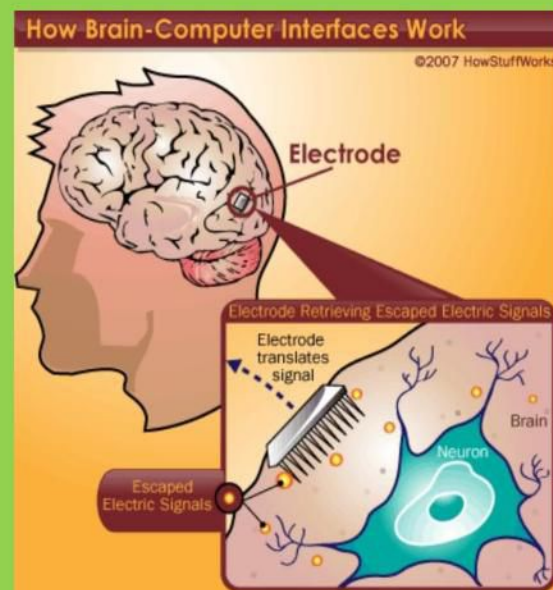
As the power of modern computers grows alongside our understanding of the human brain, we move ever closer to making some pretty spectacular science fiction into reality. Imagine transmitting signals directly to someone's brain that would allow them to see, hear or feel specific sensory inputs. Consider the potential to manipulate computers or machinery with nothing more than a thought. It isn't about convenience -- for severely disabled people, development of a brain-computer interface (BCI) could be the most important technological breakthrough in decades. In this article, we'll learn all about how BCIs work, their limitations and where they could be headed in the future.

The Electric Brain

The reason a BCI works at all is because of the way our brains function. Our brains are filled with neurons, individual nerve cells connected to one another by dendrites and axons. Every time we think, move, feel or remember something, our neurons are at work. That work is carried out by small electric signals that zip from neuron to neuron as fast as 250 mph the signals are generated by differences in electric potential

carried by ions on the membrane of each neuron.

Although the paths the signals take are insulated by something called myelin, some of the electric signal escapes. Scientists can detect those signals, interpret what they mean and use them to direct a device of some kind. It can also work the other way around. For example, researchers could figure out what signals are sent to the brain by the optic nerve when someone sees the color red. They could rig a camera that would send those exact signals into someone's brain whenever the camera saw red, allowing a blind person to "see" without eyes.



Personalities to know

L.Shalini, III, CSE 'B'

S.no.	Personalities	Positions
1	Sheryl Sandberg	The COO of Facebook but not well-known
2	Jack Dorsey	The First CEO & cofounder of twitter
3	Jeff Bezos	The Chairman & CEO of Amazon.com
4	Jony Ive	The Senior Vice President & was behind the success of Apple company
5	Yves Behar	The founder of Fuse project, a versatile industrial firm
6	Julie Uhrman	The creator of Ouya, an Android- based console & a game developer
7	Eben Upton	The founder of Raspberry Pi foundation, which promotes computer science in schools
8	Eric Migicovsky	The founder of Pebble tech, and designed E-paper watch
9	Steve Ballmer	CEO of Microsoft after Gates, improved cloud computing & other products
10	Bre Pettis	The cofounder & CEO of MakerBot, 3D printing robot
11	Aaron Levie	The co-founder & CEO of Box, a file sharing service that is secure than Dropbox
12	Martin Casado	The networking guru of VMware & inventor of OpenFlow
13	Clara Shih	The founder of Hearsay social, a networking tool
14	Sebastian Thrun	The Vice president, Fellow at Google & a professor
15	Leah Busque	The founder of TaskRabbit, a website and mobile app to outsource small jobs
16	Robby Walker	The Co-founder of Zenter, a PowerPoint-like program brought by Google
17	Marissa Mayer	The president & CEO of Yahoo & most visible woman in technology
18	Larry Ellison	CEO of Oracle Corporation, a 2nd largest independent software company